



Figure 118. P-y curves for Reese's Weak Rock model (continued)

Geologic Model

The Geologic model is based on the model of Cho (2002), and uses properties such as the Geologic Strength Index (GSI), unconfined compressive strength, and rock mass parameters (m_i , m_s). This model was validated using test results from the laterally drilled shafts embedded in weathered rock as reported by Gabr et al. (2002).

As shown in Equation 27, one hypothesis proposed by Cho (2002) was that a hyperbolic function could adequately model P-y curves for weathered rock. The hyperbolic function is generated using two properties: lateral subgrade reaction and the lateral ultimate resistance.

Equation 27

$$P(y) = \frac{y}{a + by}$$

where,